

CLAIMS

What is claimed as new and desired to be protected by
Letters Patent of the United States is:

1. A compensation method for detecting the seeking speed of a pick-up head in an optical disk drive, comprising the steps of:
converting a tracking error (TE) signal into a tracking error zero cross (TEZC) signal;
averaging the pulse widths of a plurality of adjacent pulses on the TEZC signal to derive an average; and
designating the average as the pulse width of a recovered TEZC signal.
2. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 1, wherein the number of adjacent pulses to be averaged is two.
3. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 1, further

comprising the step of:

deriving the seeking speed from the recovered TEZC signal.

4. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 3, wherein the seeking speed is a constant.
5. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 3, wherein the seeking speed has acceleration.
6. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 1, further comprising the steps of:
converting an RF ripple signal into an RF ripple zero cross (RFZC) signal;
averaging the pulse widths of a plurality of adjacent pulses on the RFZC signal to derive an average; and
designating the average as the pulse width of a recovered RFZC signal.

7. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 1, further comprising the step of:
employing the pulse width of the recovered TEZC signal to assist the feedback control of the seeking speed of the pick-up head.
8. A compensation method for detecting the seeking speed of a pick-up head in an optical disk drive, comprising the steps of:
converting a TE signal into a TEZC signal;
deriving a series of half-track seeking speeds from the TEZC signal;
averaging a plurality of successive half-track seeking speeds to derive an average; and
designating the average as a recovered half-track seeking speed.
9. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 8,

wherein the number of adjacent half-track seeking speeds to be averaged is two.

10. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 8, further comprising the steps of:
converting an RF ripple signal into an RFZC signal;
deriving a series of half-track seeking speeds from the RFZC signal;
averaging a plurality of successive half-track seeking speeds derived from the RFZC signal to derive an average;
and
designating the average as a recovered half-track seeking speed.
11. A compensation method for detecting the seeking speed of a pick-up head in an optical disk drive, comprising the steps of:
converting an RF ripple signal into an RFZC signal;
deriving a series of half-track seeking speeds from the RFZC signal;

averaging a plurality of successive half-track seeking speeds to derive an average; and
designating the average as a recovered half-track seeking speed.

12. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 11, wherein the number of adjacent half-track seeking speeds to be averaged is two.
13. The compensation method for detecting the seeking speed of a pick-up head in an optical disk drive of Claim 11, further comprising the step of:
employing the pulse width of the recovered half-track seeking speed to assist the feedback control of the seeking speed of the pick-up head.